UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, WA 98101

July 8, 2005

Reply To
Attn Of: ETPA-088

Ref: 04-072-COE

Jack Sands, Project Manager
U.S. Army Corps of Engineers
Walla Walla District
201 North 3rd Avenue
Walla Walla, Washington 99362-1876

Dear Mr. Sands:

The U.S. Environmental Protection Agency (EPA) has reviewed the **final** Environmental Impact Statement (EIS) for the proposed **Lower Snake River Navigation Maintenance** project (CEQ No. 20050094) in accordance with our responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act. Section 309, independent of NEPA, specifically directs EPA to review and comment in writing on the environmental impacts associated with all major federal actions and rate the adequacy of agency documentation in meeting NEPA requirements.

EPA received the final EIS dated June 2, 2005. EPA's review of the final EIS emphasized whether our comments were adequately addressed in the draft EIS. The draft EIS comments focused on a revised cumulative impacts analysis, requested clarification on in-water disposal habitat, and provided recommendations for clarifying the planned adaptive management monitoring. EPA believes that the comments have been adequately addressed in the final EIS. We clarify our recommendation for "performance standards" related to the creation of shallow-water habitat for your consideration, suggesting additional clarification in the anticipated monitoring reports.

The EIS analyzes the impact of the Army Corps of Engineers' (Corps) proposal to dredge up to 450,000 cubic yards of sediment from portions of the lower Snake River to maintain the navigation depth of 14 feet. The Corps proposes in-water disposal for beneficial reuse by creating 3.7 acres of shallow in-water habitat to benefit juvenile salmonids at depths of 10 feet and shallower, and 11.7 acres of lesser quality habitat at water depth elevations from 10 to 20 feet.

EPA's Comments Have Been Addressed

Beneficial Reuse. The additional reference to and citation of Corps policy on beneficial reuse demonstrates that the proposed disposal site is consistent with Corps policy. This clarification is an improvement from the draft.

EPA also expressed concerns about the potential for unintended negative impacts from the habitat creation resulting from predation and temperature. EPA is satisfied with the responses provided, including the cited response to comments for IDFG (E-38, #19) and CRITFC (E-90, #7) addressing EPA's comments on these issues. Since predation accounts for only 6% (48,600 of 786,470) of possible juvenile outmigration throughout the entire Lower Granite Reservoir, where the disposal/habitat site is planned (EIS, p. 3-26), EPA's concerns about increased predation from a localized 3.7 acre area appear to be limited in scope such that the adaptive management commitments will be appropriate to address the issue. With respect to temperature, the EIS (p. 3-24) clarifies that the desired effects from created shallow water habitat is to increase water temperatures earlier in the spring to a target of 64 ºF to optimize the growth rate of subyearling fall Chinook salmon. The EIS also recognizes that active reservoir management via summer flow augmentation from Dworshak reservoir in the summer is in place to reduce temperatures in Lower Granite reservoir when they exceed 68 ºF (p.3-21). The reorganization of EIS Section 3.2.1.2 is helpful in explaining the complex interactions between temperature, salmon migration, and the proposed disposal site. EPA also notes the inclusion of the Biological Opinion (BO) from NOAA Fisheries, and that predation and temperature increases from the habitat creation are not identified as a concern in the BO. EPA defers to NOAA Fisheries' expertise on this issue relative to ESA-listed Snake River Fall (SRF) Chinook salmon and is satisfied with changes to the final EIS addressing our concerns.

Ultimately, the evaluation of results from the monitoring plan (EIS Appendix D) will determine whether the created habitat will provide the desired beneficial function for resting and rearing of SRF Chinook. EPA fully supports the plans to collect data from the habitat creation, since the data will be integral to predicting potential benefits from future navigation maintenance disposal by similar methods.

EPA clarifies its recommendation for specific "performance standards" related to the created habitat at RM116. It is clear from the discussion in the monitoring plan that reference sites will be used for comparing use of SRF Chinook. After additional discussion with Corps staff and rereading the monitoring plan, EPA understands that explicit performance standards are not warranted for the in-water habitat site. The monitoring plan does, however, acknowledge objectives for the site consistent with EPA's intentions, although they are not highlighted as such. The objectives include:

- long-term site stability (erosion analysis, hydrographs for size/elevation parameters);
- site use by juvenile salmon, avoiding significant predation (catch per unit effort) with comparisons to pre-project conditions and comparison to reference sites; and
- site suitability/quality (80% sand substrate or greater, temperature, DO, water velocity, and substrate and marcoinvertebrate analysis).

EPA recommends that these items be highlighted as the identified performance objectives in the first performance monitoring report so that it will be clearer what the adaptive management program for the site is trying to achieve, how those achievements will be measured, and what the existing baseline data shows.

Page D-5 of the monitoring plan describes previous reference site data in terms of "moderate" or "marginal" use, and "low" abundance, "zero to low" salmonid use, etc. EPA recommends that the initial monitoring report summarize any quantitative data associated with these qualitative evaluations of the reference sites, and further explain how the analysis of the RM116 disposal site for this project will be evaluated: quantitatively, qualitatively, or both. Page D-13 provides some indication of what kind of evaluation is intended for the created habitat, but further explanation would be helpful.

Finally, EPA appreciates the Corps' inclusion of a statement (D-13) that corrective action will be considered, if necessary, as further indication along with the extensive monitoring of the agency's commitment to the disposal site as a true beneficial reuse.

Alternatives Analysis. The addition of text in Section 2 provides an improved discussion of the limitation of upland disposal in the area adequate for this one-year maintenance EIS and is appropriate to the scale of the action proposed.

Tribal Consultation. The final EIS provides the dates of letters, meetings, and summary of concerns expressed. EPA recommends that the Corps continue to consult with tribal governments and document how the Corps will respond to any specific concerns of tribal governments that are within the scope of the project and within the ability of the Corps to address. EPA recommends that the Corps also explain any instance where the Corps does not believe that issues raised can be adequately addressed (e.g., too vague, outside the project scope, technically impracticable, etc.).

Cumulative Impacts. The cumulative impacts analysis contains substantial changes addressing EPA's comments and improving the analysis. The extensive summary of past, present and reasonably foreseeable future actions suggests that the most significant cumulative impact from past actions to salmon and their habitat occurring in the local environment is the presence of the dams which significantly lengthened the migration time, eliminated 80% of the historic spawning habitat, and increased ambient temperatures in the lower Snake River reservoirs (pp. 4-103 – 105).

Although the cumulative impacts analysis focuses on five potentially significant cumulative effects, one of the more complicated potential impacts to understand are impacts on the ESA- listed salmon, especially the Snake River Fall (SRF) Chinook salmon due to its diminished population size and the multiple available data sets on various aspects of the overall salmon population including:

- adult salmon returns at Bonneville Dam,
- adult salmon returns at Snake River at Ice Harbor dam
- adult salmon returns at Granite Dam (immediate project area)
- estimated juvenile salmon outmigrating
- ocean-type SRF Chinook versus overwintering SRF chinook, and
- natural/wild versus hatchery salmon.

These various data references provide good background information on the historical variability of the annual salmon returns. The annual variability in the 10-year data adds to the complexity of comparing it with other available data, making it difficult to understand what the current salmon population is in the vicinity of the project and how stable the population is at present. EPA appreciates the Corps' efforts to include the available data, allowing the public and decision maker to factor the various elements into their thinking on the proposed project.

EPA's review focused in particular on the SRF Chinook population. It is the smallest in number relative to other ESA-listed salmon runs with a mean of 3,462 per year "naturally-produced [adult] SRF Chinook salmon" during 2001 through 2003 (EIS Appendix A, BA, p.42) at the Lower Granite Dam, where the disposal site is intended to provide beneficial effects on the SRF Chinook. Chris Pinney, Corps biologist, confirmed that these numbers represent adult salmon returning to spawn (personal communication, July 6, 2005). The SR Spring/Summer (SRSS) mean is ten-fold greater than for SRSS Chinook at 33,581 for the same time period. (EIS Appendix A, BA p. 46) The cumulative impacts analysis looks at the 10-year average of salmon (wild and hatchery fish combined) returns to lower Snake River at Ice Harbor with an adult return of 247,870 (1995 -2004) and Figure 4-5 showing approximately 65,000 adults returning to Lower Granite in the same 10-year period. The 10-year average numbers do not distinguish between SRF and SRSS. The NOAA Fisheries BO estimates a take of only 1,112 juvenile SRF Chinook 0.04% assuming that 250,000 of the estimated 2.5 million outmigrating juvenile SRF Chinook may be in the project area during dredging and disposal and 50% may remain there during dredging (NOAA BO p. 33). Collectively, this information provides substantially more

baseline analysis of salmon as a threshold criterion for evaluating cumulative impacts with the 10-year adult return data showing both the variability from year to year and the stronger trend in recent years relative to preceding decades.

Impacts from dredging and the potential for increased temperature and/or predation resulting from the in-water habitat are discussed (pp. 4-118, 4-132, and 4-133) and do not appear to be significant cumulative impacts when compared to the current environmental baseline impacts for these factors on the SRF Chinook, since the project impacts are primarily confined both temporally and spatially -- navigation maintenance is limited to winter months (December to February) to avoid the typical juvenile salmon migration windows (EIS p. 3-1) and historic

dredging actions have not shown a correlation with significant impacts on the adult salmon in the action area (p.4-113).

The cumulative impacts analysis is substantially improved from the draft EIS with respect to the level of detail provided on historical impacts and the rationale provided for narrowing the analysis, consistent with EPA's May 1999 guidance on analyzing cumulative impacts. For your information, EPA is enclosing a copy of a recently issued guidance memorandum from CEQ dated June 24, 2005, which reiterates CEQ regulations and reemphasizes a "concise description of the identifiable present effects of past actions" and "deemphasizing insignificant issues" as appropriate ways to focus the analysis. The newest guidance memorandum is provided for your consideration in preparation of future EIS documents.

Previous Scoping Efforts. The inclusion of additional text explaining the broader range of information considered in preparing this EIS is more reflective of the breadth of information sources considered.

Thank you for the opportunity to review the final EIS. If you would like to discuss the content of this letter, please contact Peter Contreras at (206) 553-6708.

Sincerely,

//S//
Christine B. Reichgott, Manager
NEPA Review Unit

Enclosure

Cc: John Malek, EPA/ARU